

UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF MISSOURI  
EASTERN DIVISION

VUTEK, INC.,	)	
	)	
Plaintiff,	)	
	)	
vs.	)	Case No. 4:07CV1886 CDP
	)	
LEGGETT & PLATT, INC., et al.,	)	
	)	
Defendants.	)	

**MEMORANDUM AND ORDER**

This case is the second lawsuit between Vutek, Inc. and Leggett & Platt, Inc. that centers around certain patents for ink jet printers. In the earlier suit, L&P sued Vutek claiming that Vutek had infringed L&P's U.S. Patent No. 6,755,518 (the '518 patent). L&P lost that suit after Vutek argued successfully on summary judgment that the '518 patent was invalid. That invalidity ruling was affirmed by the Federal Circuit. L&P has now obtained Patent No. 7,290,874 (the '874 patent), a continuation of the invalidated '518 patent. In this second lawsuit, Vutek seeks a declaratory judgment stating that the new '874 patent is likewise invalid for the same reasons the '518 patent was invalid. Vutek has moved for summary judgment on this point. Having reviewed the substantial undisputed evidence submitted by the parties, and having carefully considered the parties' respective arguments, I conclude that the '874 patent is invalid because its claims

are indefinite and obvious in light of prior art. I will therefore grant Vutek's motion for summary judgment. Both parties have additional claims still pending. A scheduling conference will be held at a later date to determine a schedule for resolving remaining disputes.

### Background

#### A. Prior Litigation

The following facts were adduced in the earlier lawsuit between Vutek and L&P. These facts remain true today and are relevant to the current dispute.

The L&P '518 patent was entitled "Method and Apparatus for Ink Jet Printing on Rigid Panels," and described systems for jetting, freezing, and substantially curing UV curable inks onto a substrate without deforming the substrate. The '518 patent taught the use of "cold UV" lamps to freeze and substantially cure the dots of ink at the printing station. As described in the patent, a "cold UV" light source produces a sufficient amount of UV radiation to substantially cure the dots of ink at the printhead without exposing the dots to an amount of infrared radiation that would deform a heat sensitive substrate.

After L&P sued Vutek for infringing the '518 patent, Vutek moved for summary judgment seeking to invalidate the patent. Vutek argued that the '518 patent was anticipated by an earlier Vutek patent, No. 6,457,823 (the '823 patent). The '823 patent was titled "Apparatus and Method for Setting Radiation-Curable

Ink.” The invention taught mounting a radiation source adjacent to ink jet printheads so that energy sufficient to cause the ink to set is applied just as the ink has been jetted. Additionally, Vutek argued that the L&P ‘518 patent was invalid for obviousness because it would have been obvious to one skilled in the art to combine the earlier teachings of the Vutek ‘823 patent and a second Vutek patent, No. 6,616,355 (the ‘355 patent). The ‘355 patent was titled “Printing System for Accommodating Various Substrate Thicknesses,” and the invention taught a printing system that includes a sensor and control system to maintain a desired gap between the printheads and the substrate.

In a memorandum and order dated December 26, 2006, this Court granted Vutek’s motion for summary judgment and ruled that the L&P ‘518 patent was invalid for three reasons. *Leggett & Platt, Inc. v. Vutek, Inc.*, Case No. 4:05CV788 CDP, 2006 WL 3813677 (Mo. E.D. Dec. 26, 2006). First, the ‘518 patent was anticipated by Vutek’s ‘823 patent. Second, certain claims in the ‘518 patent were obvious in light of teachings disclosed in Vutek’s ‘823 and ‘355 patents. Finally, all disputed claims in the ‘518 patent were invalid because they were indefinite. In support of those conclusions, the memorandum and order also held that Vutek’s ‘823 patent “(1) includes a cold UV curing assembly, (2) discloses substantially curing ink at the printhead, (3) inherently minimizes substrate deformation, and (4) discloses alternately energizing the curing lamps.” *Id.* The order further held

that the terms “deform, deforming, and deformation” as used in the ‘518 patent were not amenable to reasonable construction, and were therefore indefinite. *Id.*

L&P appealed this ruling to the Federal Circuit. The Federal Circuit affirmed the decision on August 21, 2008, holding that the disputed claims in the ‘518 patent were invalid because they were anticipated or obvious in light of prior known art. *Leggett & Platt, Inc. v. Vutek, Inc.*, 537 F.3d 1349 (Fed. Cir. 2008).

B. Current Litigation

The L&P ‘874 patent was issued on November 6, 2007, before the Federal Circuit decision affirming the invalidity of the ‘518 patent. The patent contains the same abstract, drawings, background, and detailed description of the preferred embodiment as found in the ‘518 patent. The claims of the new patent, however, are different. The parties disagree as to the scope and meaning of these new claims.

In addition to the ‘874 patent, L&P has also obtained U.S. Patent No. 7,520,602 (the ‘602 patent). Like the ‘518 and the ‘874, the ‘602 patent claims an apparatus and method for ink jet printing on rigid substrates. The ‘602 patent was issued on April 21, 2009, after the Federal Circuit issued its ruling on the invalidity of the ‘518 patent and after the current summary judgment motion on the ‘874 patent was filed. L&P has amended its counterclaim against Vutek to include a count for infringement of the ‘602 patent. Likewise, Vutek has also

amended its complaint to add invalidity and non-infringement claims for the ‘602 patent. The ‘602 patent and the claims relating to it are not part of the current summary judgment motion. However L&P has raised certain arguments on the validity of the ‘874 patent that relate to the ‘602 patent prosecution history.

### Discussion

Vutek’s summary judgment motion seeks to invalidate a patent that is largely the same as a previously invalidated patent. There are certain changes and additions to the wording and substance of the patent claims. The issue then is whether these changes save the ‘874 patent so as to differentiate it from the invalid ‘518 patent and make the ‘874 a valid patent that is definite and non-obvious. For the reasons discussed below, I conclude that they do not.

#### A. Obviousness

Under 35 U.S.C. § 103(a), a claim is obvious if “the differences between the subject matter and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person of ordinary skill in the art to which said subject matter pertains.” In order to determine obviousness under § 103, this court must: (1) determine the scope and content of the prior art, (2) ascertain the differences between the prior art and the claims at issue, (3) resolve the level of ordinary skill in the pertinent art, and (4) consider secondary considerations to give light to the circumstances surrounding the origin

of the subject matter sought to be patented. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). Obviousness is a question of law based on the factual inquiries enumerated in *Graham*. *Princeton Biochemicals, Inc. v. Beckman Coulter, Inc.*, 411 F.3d 1332, 1336 (Fed. Cir. 2005).

In the time since the parties to this case litigated the L&P ‘518 patent before me, the Supreme Court issued its opinion in *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398 (2007). Before *KSR*, Federal Circuit case law held that in order to find a patented combination of elements obvious, a court had to find in the prior art a “teaching, suggestion, or motivation” to combine the prior art teachings. The teaching, suggestion or motivation was a required element of any claim for obviousness. *See Ransomes, Inc. v. Great Dane Power Equipment, Inc.*, 232 F.3d 911 (Table) (Fed. Cir. 2000) (“Absent specific findings there was a teaching, suggestion or motivation to combine the prior art references, the district court improperly inferred that one skilled in the art would combine the prior art references to create the claimed invention.”)

*KSR* rejected this rigid, formal approach. *KSR*, 550 U.S. at 415. Although a teaching, suggestion or motivation in the prior art can be a “helpful insight” into the reasons that would have prompted a person of ordinary skill in the relevant field to combine elements in the way claimed in a new invention, the TSM test is not a mandatory formula. Rather, courts must adopt a flexible approach that asks

whether the claimed invention is “more than the predictable use of prior art elements according to their established functions.” *Id.* at 416-17. The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results. *Id.*

This is not to say that a patent composed of several elements is proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. A court must look to “interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace, and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *Id.*

L&P attempts to differentiate the ‘874 patent from the invalid ‘518 patent by making three principal arguments. First, L&P argues that, unlike Vutek’s low-power LED printers, the ‘874 patent’s claims are directed toward high power UV lamps. Second, the ‘874 patent contains filters, reflectors, and other cooling and heat dissipation methods that are entirely absent from L&P’s earlier patent or Vutek’s ‘823 patent. Finally, L&P argues that the ‘874 patent contains claims for specific lamp powers not claimed in the Vutek patent.

The primary fault in all three of these arguments is that they fail to distinguish the '874 patent from what was already widely known in the art. L&P goes to great lengths to show how the '874 patent is different from Vutek's '823 patent, but L&P has not shown how the '874 is a unique, non-obvious invention. Instead, L&P has introduced new claim terms that, while not contained in the Vutek patent, incorporate widely-known and accepted printing technologies in familiar and established roles. Pointing out specific claim elements that are not contained in Vutek's patent does not establish that L&P's patent is non-obvious.

The high power versus low power argument simply restates arguments that were rejected in the earlier suit. L&P notes that the specification in the new '874 patent (the same specification as contained in the old patent) describes 10-inch linear bulbs with operating ranges at 125 and 200 watts per inch. New patent claims 9, 10 and 18 expressly include these wattages. L&P maintains that this means the L&P patent teaches high power UV curing, while the Vutek '823 patent (which does not mention wattage requirements) is limited to low power UV curing. This argument fails because this court and the Federal Circuit have already established that the Vutek '823 patent inherently discloses LEDs that are effective to impinge sufficient UV light to cure the ink, the same as those disclosed in the L&P patent. The '518 patent litigation established that Vutek's



‘823 patent substantially cures UV ink at the printhead. L&P’s repeated arguments to the contrary are simply wrong.<sup>1</sup>

L&P goes on to argue that the Vutek ‘823 patent specifically discussed how mercury vapor lamps and traditional glow bulbs were unsuitable for use in the Vutek invention. L&P is correct on this point. But L&P then jumps to the conclusion that the Vutek patent teaches away from the innovation conceived in L&P’s ‘874 patent, and that therefore the claims of the ‘874 patent are non-obvious. This is not the case. Vutek’s patent is directed toward UV LEDs, but the patent also notes that Xenon flash tubes can be substituted as a radiation source. This disclosure provides explicit motivation to modify the Vutek invention using bulbs with higher wattages, like those claimed by L&P. But even if Vutek’s patent did not discuss alternative bulbs, and even if Vutek’s patent said that L&P’s bulbs are not suitable in Vutek’s invention, this would still not save Vutek’s patent

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<sup>1</sup>To some extent, L&P can be forgiven for repeatedly making this argument, because it is an argument that has been repeatedly accepted by the U.S. Patent & Trademark Office. In adjudicating L&P’s latest ‘602 patent, the PTO allowed the patent over Vutek’s objection because the PTO found:

[The Vutek ‘823 patent] discloses UV radiation sources mounted on the carriage so (sic) set (i.e. pre-cure) the ink to prevent the ink from spread out or ball up (Column 1: line 35-55). *However, [the ‘823 patent] does not disclose using cold UV to freeze and substantially cure jetted ink under the print head carriage and filter heat away from the substrate under the print head as the present invention.*”

(emphasis added). This finding is at odds with both this Court’s earlier order in the ‘518 case and the Federal Circuit’s decision in that case, which held that the Vutek ‘823 patent does disclose a UV curing method that is effective to substantially cure ink under the printhead.

from being obvious. The wattages disclosed in L&P's '874 patent are not new. Vutek has cited to numerous prior art references that use the same bulbs with the same power consumption. Simply specifying in the claims that the L&P bulbs are different from the Vutek bulbs is not sufficient to render the L&P patent non-obvious. The two patents are still achieving the same effective curing power, and are still performing the same function: substantially curing cold UV ink at the printhead while alternately energizing curing lamps and minimizing substrate deformation. There is nothing innovative about using different bulbs that are already widely known and widely available.

L&P's next set of arguments are directed toward the various cooling mechanisms and heat dissipation devices disclosed in the '874 patent. These mechanisms include filters and reflectors that direct infrared radiation away from the substrate, fluid cooling systems that reduce heat by directing light through fluid-filled tubes, and a controller that blocks the substrate from unnecessary exposure to heat sources. L&P argues that these mechanisms appear nowhere in the Vutek '823 patent. Moreover, it argues, the Vutek '823 patent cannot be said to have contemplated these mechanisms, because the Vutek LEDs do not generate the kind of heat that would require these cooling devices. Under this argument, there would be no need or motivation, when using the Vutek LEDs, to filter away or control heat exposure.

These arguments have some appeal, but they do not establish that the cooling mechanisms L&P added to its patent make the patent non-obvious. Vutek has put forth ample undisputed evidence showing that filters, reflectors, fluid cooling systems, and controllers were all well-known in the art, and that L&P claims only to use these mechanisms according to their established functions. In particular, Vutek cites to specific technical papers and industry websites (some of which '874 patent inventor Richard Codos states he consulted when researching his invention) that freely discuss all of these heat dissipation mechanisms. UV reflectors, for example, are discussed in a 1979 industry technical paper by Edward Blank, as well as in websites for "Eye UV" technology and Honle UV. These same prior art references also discuss UV filters. The Honle UV website and a prior patent No. 6,575,093 ("the Principe patent") discuss a controller mechanism for operating shutters to limit lamp exposure. The Blank article and Eye UV website further reference fluid cooling systems that can be coupled to a reflector or coupled to a tube. Vutek has submitted uncontroverted evidence for each of the claimed cooling or heat dispersion methods mentioned in the L&P '874 patent showing that these methods were widely known and used in the art.

L&P has not put forth a single argument (and has failed to raise any genuine factual dispute) that shows how L&P's use of these prior art technologies is anything more than a combination of familiar elements according to known

methods. The heat dissipation methods outlined the '874 patent help to emphasize how the '874 patent is different from Vutek's patent (because the '874 patent uses bulbs that are hotter than the LEDs discussed in Vutek's patent specification). But, as in the '518 case, the differences in power sources between Vutek's and L&P's patents are not significant enough to establish that L&P's invention is non-obvious. L&P does not claim that it uses the heat controlling technologies in a new way or that it has conceived of a novel or unique application of these technologies. Instead, L&P argues that the innovation in the '874 patent comes from the use of cold UV to substantially cure at the printhead. This argument has already been rejected by this Court and by the Federal Circuit. Adding known methods for controlling or limiting heat exposure (even if those methods are not present in the Vutek patent) is not a sufficient basis from which to conclude that the '874 patent is non-obvious.

Finally, L&P argues that its '874 patent is different from the invalidated '518 patent because the '874 makes reference to specific lamp powers that are not achieved by Vutek's '823 patent. This argument is simply a restatement of the high power versus low power argument, and does not establish non-obviousness. Vutek has put forth unrefuted evidence showing that the lamp powers claimed by L&P were widely known and widely used. This third argument therefore fails as well.

L&P also makes a number of arguments directed toward secondary indicia of non-obviousness. L&P points in particular to an industry award that was presented to the '874 patent inventor Mr. Codos, allegations that Vutek has copied L&P's technology, and evidence of the commercial success of Vutek's printers that allegedly infringe L&P's '874 patent. Secondary indicia of non-obviousness constitute independent evidence of non-obviousness and can be "quite instructive in the obviousness inquiry." *Sud-Chemie, Inc. v. Multisorb Technologies, Inc.*, 554 F.3d 1001, 1007 (Fed. Cir. 2008). These arguments are not persuasive here, however, because the undisputed facts already demonstrate that all the claims of the '874 patent are in fact obvious in light of prior art. The secondary considerations argued by L&P, even if assumed to be factually true, do not raise a genuine fact dispute precluding summary judgment. *See Rothman v. Target Corp.*, 556 F.3d 1310, 1321 (Fed. Cir. 2009) ("A strong prima facie obviousness showing may stand even in the face of considerable evidence of secondary considerations."); *Motorola, Inc. v. Interdigital Tech. Corp.*, 121, F.3d 1461, 1472 (Fed. Cir. 1997) ("In reaching an obviousness determination, a trial court may conclude that a patent claim is obvious, even in the light of strong objective evidence tending to show non-obviousness.").

B. Indefiniteness

In addition to the obviousness determination, I also held that the ‘518 patent was invalid because its claim terms using the words “deform, deforming, or deformation” were indefinite.<sup>2</sup> In the current patent, L&P has attempted to make these terms more definite and to provide a standard by which “deformation” can be judged or measured.

Under the second paragraph of 35 U.S.C. § 112, a patent must contain “one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.” A determination that a patent claim is invalid for failure to meet the definiteness requirement of 35 U.S.C. § 112, par. 2 is a conclusion “that is drawn from the court’s performance of its duty as the construer of patent claims [and] therefore, like claim construction, is a question of law.” *Bancorp Services LLC v. Hartford Life Ins. Co.*, 359 F.3d 1367 (Fed. Cir. 2004), quoting *Atmel Corp. v. Info. Storage Devices, Inc.*, 198 F.3d 1374, 1378 (Fed. Cir. 1999). The standard for indefiniteness is whether “one skilled in the art would understand the bounds of the claim when read in light of the specification.” *Exxon Research and Engineering Co. v. U.S.*, 265 F.3d 1371, 1375 (Fed. Cir. 2001). For a patent to properly describe the invention under § 112, there must be some objective standard given, so that the definition of the claim is “not

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<sup>2</sup>The Federal Circuit did not consider this issue.

completely dependent on a person's subjective opinion.” *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1350 (Fed. Cir. 2005).

In the ‘518 litigation, the patent used the term “deformation” of print quality without any usable, quantifiable standard. Therefore, there was a level of subjectivity required to determine print quality. Acceptable print quality depended not only on the commercial application for which the printer was being used, but also on the subjective belief of the customer. Customers and sellers could frequently disagree about whether a particular job meets the level of quality for which they bargained. Consequently, the patent lacked any concrete, objective standard that would save the terms “deform, deforming, or deformation” from being indefinite.

In the new ‘874 patent, L&P has solved this problem to an extent. Claims 1, 4, 19, and 20 all use the term “deform” in such a way so as to provide an objective standard for interpreting the patent language. These terms discuss deformation of a substrate that would “materially alter” or “substantially change” the “predetermined distance between the substrate and the printhead.” This standard removes the term “deform” from the realm of purely subjective judgments and establishes a quantifiable standard. Deformation is judged in terms of a specific observation – the measurement of a predetermined distance. Individual subjective

opinions are not the basis for judging what has been deformed. These claim terms are therefore not indefinite.

Other claim terms, however, still suffer from the same defect that was present in the '518 patent. Claims 2, 5, 12, and 14 are all independent claims that refer to “thermally deform[ing]” or “substantially thermally deform[ing]” the substrate. Just as in the '518 patent, there is nothing objective or quantifiable about this language. L&P has not modified this language in any way so as to save it from being indefinite. These claims, and their dependent claims 3, 6 through 11, 13, and 15 through 17, are invalid.<sup>3</sup>

C. Misconduct Before the PTO

Vutek's summary judgment motion is a motion to invalidate the '874 patent on the grounds of indefiniteness and obviousness. Vutek's briefs, however, make additional arguments alleging that L&P's patent should be rendered invalid because L&P committed misconduct before the PTO in prosecuting the application that became the '874 patent. Because I conclude that the '874 patent is invalid for the reasons stated above, I do not reach the arguments on misconduct.

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<sup>3</sup>Independent claim 18 uses the adjective “deformable” to describe certain printing substrates. This is not an indefinite term because, used as an adjective, “deformable” does not set forth a subjective standard for print quality (i.e., “deformable” merely describes something that can be deformed, but it is not a term that indefinitely connotes any particular deformation). Claim 21 does not use the term “deform” at all.



Count V of Vutek's amended complaint, which alleges misconduct before the PTO, remains pending.

### Conclusion

An issued patent is presumed valid, and a party seeking to invalidate a patent bears a heavy burden to show invalidity by clear and convincing evidence. 35 U.S.C. § 282. *ICU Medical, Inc. v. Alaris Medical Systems, Inc.*, 558 F.3d 1368, 1376 (Fed. Cir. 2009). In this case, Vutek has met that burden because it has shown through undisputed evidence that the claims in L&P's '874 patent are obvious in light of teachings found in the prior art. Specifically, Vutek has shown that the fundamental teachings of the '874 patent are no different from those in the '518 patent. The '518 patent has already been invalidated by this Court and by the Federal Circuit because its cold UV technology was anticipated by earlier Vutek patents. Secondly, Vutek has shown that the additional claims included in the '874 patent are nothing more than prior art innovations applied in familiar and predictable ways. Vutek has shown that the background knowledge possessed by a person of ordinary skill in the art coupled with the interrelated teachings of prior technology would naturally lead a person of ordinary skill to adopt the methods described by L&P. L&P has offered no evidence that refutes this claim. Summary judgment is therefore appropriate, and the L&P '874 patent is properly invalidated for obviousness. Additionally, the indefinite terms in the '874 patent that are no

different from those in the '518 patent likewise render claims of the '874 patent indefinite.

Accordingly,

**IT IS HEREBY ORDERED** that Vutek's motion [#41] for summary judgment is granted in part and denied in part as follows: Claims 1 through 21 of Leggett and Platt's '874 patent are invalid under 35 U.S.C. § 103(a) for obviousness; alternatively, claims 2, 3, and 5 through 17 are invalid under 35 U.S.C. § 112, par. 2, for indefiniteness.

A scheduling conference to address remaining claims will be set by a separate order.



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CATHERINE D. PERRY  
UNITED STATES DISTRICT JUDGE

Dated this 14th day of July, 2009.